

R E M A R K S

Claims 1-8 were rejected as anticipated by BRIEF et al. 6,205,501. The claims have been amended and reconsideration and withdrawal of the rejection are respectfully requested.

The amended claims define a USB evaluator in which, when a NAK packet is received in response to an IN token, the evaluator holds and repeatedly transmits the IN token automatically until the USB function returns a DATA or STALL packet. As explained at page 25, lines 13-20, this avoids the need to consider the length of time needed for the USB function to return a DATA packet. The specific circuitry claimed for the evaluator holds and retransmits the IN token at prescribed time intervals until the DATA/STALL packet is received.

BRIEF et al. do not disclose or suggest a USB evaluator in which, when a NAK packet is received from a USB function in response to an IN token, the IN token is held and repeatedly transmitted automatically until the USB function returns a DATA or STALL packet. Accordingly, the amended claims avoid the rejection under §102.

The device in BRIEF et al. is similar to the admitted prior art in that there is no provision for repeated transmission of a held IN token. The invention in this reference is related to the use of buffers by the endpoints (the USB functions) and apparently avoids the need for specifically assigned buffers. As in the admitted prior art, the response to an IN token is an ACK

packet if the endpoint is ready, a NAK if the endpoint is not ready, or a DATA or STALL packet in other situations. There is no indication in the reference that the return of a NAK packet from the endpoint causes transmission of another IN token from an evaluation unit in which the IN token has been held.

Claim 8 is in "means-plus-function" form and invokes interpretation under §112, sixth paragraph. The corresponding structure is described at pages 17-25 of the present application. BRIEF et al. do not disclose or suggest the same or equivalent structure for performing the function claimed and thus claim 8 further avoids the rejection under §102.

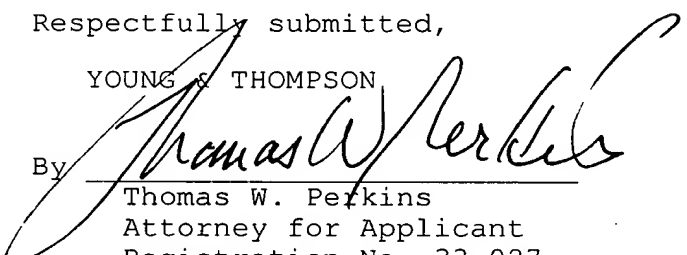
In view of the present amendment and the foregoing remarks, it is believed that the present application has been placed in condition for allowance. Reconsideration and allowance are respectfully requested.

Attached hereto is a marked-up version of the changes made to the claims. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE."

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Claim 1 has been amended as follows:

--1. (amended) A universal serial bus function evaluator connected between a computer and an universal serial bus function, said universal serial bus function evaluator comprising:

a token storage memory for storing a token transmitted from said computer;

a packet type judging circuit for judging a type of a return data packet returned from said universal serial bus function; and

a functional circuit connected to said token storage memory for fetching IN token from said token storage memory and holding the same, and said functional circuit also being connected to said packet type judging circuit for receiving an information about the type of said return data packet from said packet type judging circuit, so that if said return data packet is of NAK type, then said functional circuit automatically transmits the IN token held therein to said universal serial bus function[, and if] repeatedly until said return data packet is of either DATA type or STALL type, then said functional circuit cancels the held IN token.--

Claim 6 has been amended as follows:

--6. (amended) A universal serial bus function evaluator connected between a computer and an universal serial

bus function, said universal serial bus function evaluator comprising:

- a token storage memory for storing a token transmitted from said computer;

- a token transmission circuit connected to said token storage memory for transmitting a token stored in said token storage memory;

- an IN token detecting circuit connected to said token transmission circuit;

- an oscillator for generating a clock signal;

- an IN token holding circuit connected to said oscillator for receiving said clock signal and also connected to said token transmission circuit for receiving an IN token from said token transmission circuit and holding the same;

- a receiving shift register being connected to a universal serial bus function for receiving a return packet from said universal serial bus function;

- a packet type judging circuit connected to said receiving shift register for receiving said return packet and judging a type of said return packet;

- an EOP detecting circuit connected to said universal serial bus function for receiving said return packet to detect a packet end of said return packet;

- a timing controller connected to said oscillator for receiving said clock signal and also connected to said EOP

detecting circuit for receiving an EOP detecting signal which represents said packet end of said return packet, said timing controller also connected to said packet type judging circuit for receiving an information about the type of said return packet, and said timing controller also connected to said IN token holding circuit for controlling said IN token holding circuit both in a holding timing for holding said IN token and in a transmitting timing for transmitting said IN token to said universal serial bus function,

so that if said return packet is of NAK type and said timing controller receives both said return packet of NAK type and said EOP detecting signal, then said timing controller allows said IN token holding circuit to transmit the IN token held therein to said universal serial bus function[, and if] repeatedly until said return data packet is of either DATA type or STALL type, then said timing controller instructs said IN token holding circuit to hold said IN token therein.--

Claim 8 has been amended as follows:

--8. (amended) A universal serial bus function evaluating system connected between a computer and an universal serial bus function, said universal serial bus function evaluating system comprising:

means for storing a token transmitted from said computer;

means for judging a type of a return data packet returned from said universal serial bus function;

means for fetching IN token from said storing means and holding the same;

means for receiving an information about the type of said return data packet from said packet type judging circuit, so that if said return data packet is of NAK type, then said functional circuit automatically transmits the IN token held therein to said universal serial bus function[, and if] repeatedly until said return data packet is of either DATA type or STALL type, then said functional circuit cancels the held IN token.--